Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 28. (Cancelled).

Claim 29. (Previously presented) A sensor comprising:

an organic block copolymer coating disposed upon a detection device; wherein the detection device comprises an acoustic wave device or a quartz crystal microbalance device and further wherein the organic block copolymer coating has a partition coefficient of greater than or equal to about 10^5 towards at least one analyte; and

the organic block copolymer coating comprises at least a first segment and a second segment, and the first segment has a glass transition greater than or equal to about 23 degrees Celsius and wherein the second segment has a glass transition temperature of less than 23 degrees Celsius.

Claim 30. (Original) The sensor of Claim 29, wherein the coating has a thickness of about 0.1 nanometers to about 100 micrometers.

Claims 31 - 32. (cancelled)

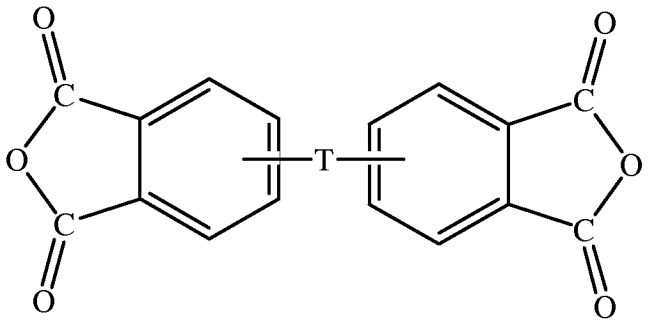
Claim 33. (Currently amended) The sensor of Claim 29, wherein the first segment is an organic polymer, and wherein the organic polymer is polyacetal, polyacrylic, polycarbonate, polystyrene, polyester, polyamide, polyamideimide, polyarylate, polyarylsulfone, polyethersulfone, polyphenylene sulfide, polyvinyl chloride, polysulfone, ~~polyimide,~~ polyetherimide, polytetrafluoroethylene, polyetherketone, polyether etherketone, polyether ketone ketone, polybenzoxazoles, polyoxadiazoles, polybenzothiazinophenothiazines, polybenzothiazoles, polypyrazinoquinoxalines, polypyromellitimides, polyquinoxalines, polybenzimidazoles, polyoxindoles, polyoxoisoindolines, polydioxoisoindolines, polytriazines, polypyridazines, polypiperazines, polypyridines, polypiperidines, polytriazoles, polypyrazoles, polypyrrolidines, polycarboranes, polyoxabicyclononanes, polydibenzofurans, polyphthalides, polyacetals, ~~polyanhydrides,~~ polyvinyl ethers, polyvinyl thioethers, polyvinyl alcohols, polyvinyl ketones, polyvinyl halides, polyvinyl nitriles, polyvinyl esters, polysulfonates, polysulfides, polythioesters, polysulfones, polysulfonamides, polyureas, polyphosphazenes, polysilazanes, or a combination comprising at least ~~one~~ two of the foregoing organic polymers.

Claim 34. (Previously presented) The sensor of Claim 29, wherein the second segment is an organic polymer, and wherein the organic polymer is a polybutadiene, polyisoprene, polychloroprene, amorphous copolymers of ethylene and propylene, butyl rubber, styrene-butadiene rubber, nitrile rubber, ethylene vinyl acetate rubber, acrylic rubber, fluorine rubber, carboxynitroso rubber, ethylene-vinylacetate rubber, phosphazine rubber, polysulfide rubber, or a combination comprising at least one of the foregoing organic polymers.

Claim 35. (Currently amended) The sensor of Claim 33, wherein ~~the first segment is a polyimide and~~ the second segment is a polysiloxane.

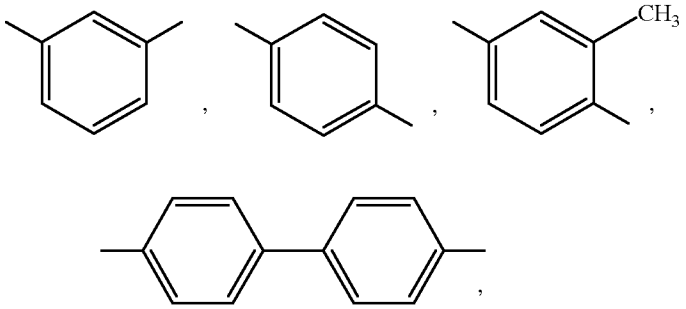
Claim 36. (Currently amended) The sensor of ~~Claim 35~~ Claim 33, wherein the first segment is a polyimide that is formed by the reaction of a dianhydride with a diamine.

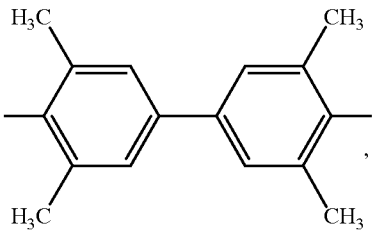
Claim 37. (Original) The sensor of Claim 36, wherein the dianhydride has the structure of formula (II)



(II)

wherein the divalent T moiety bridges the 3,3', 3,4', 4,3', or 4,4' positions of the aryl rings; T is -O- or a group of the formula -O-Z-O-; Z is a divalent radical selected from the following formulae (III)





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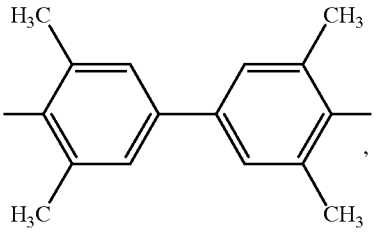

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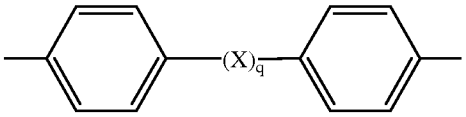
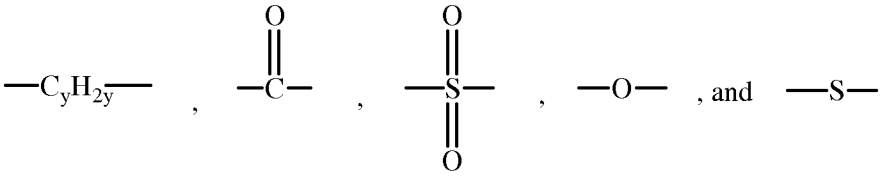
and 

(III)

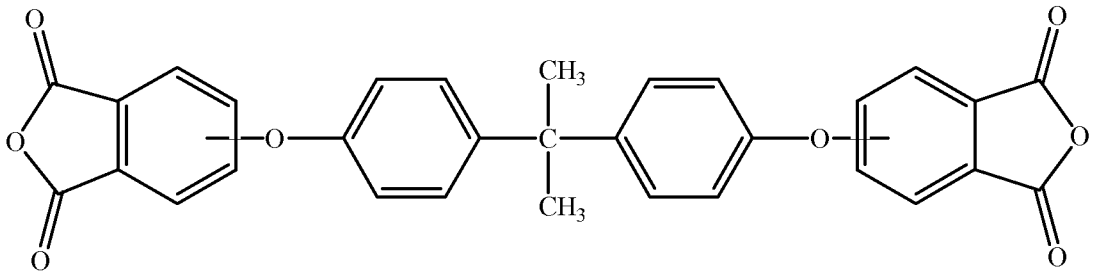
wherein X is a member selected from divalent radicals of the formulae (IV)



(IV)

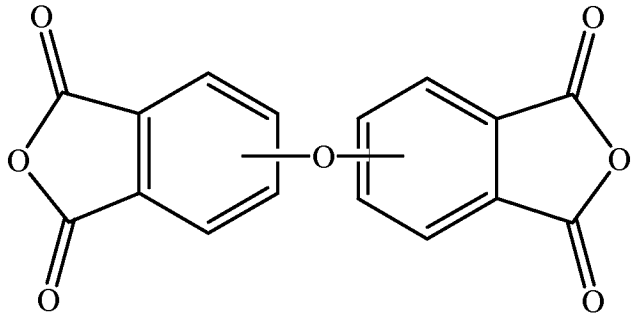
y is an integer of 1 to about 5, and q is 0 or 1.

Claim 38. (Original) The sensor of Claim 36, wherein the dianhydride is bisphenol A dianhydride (BPADA), which consists of one or more isomers having the structure of formula (V),



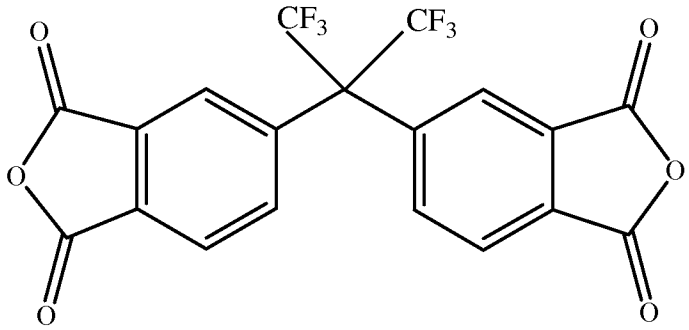
(V)

4,4'-oxy-diphthalic anhydride (ODPA), which consists of one or more isomers having the structure of formula (VI),



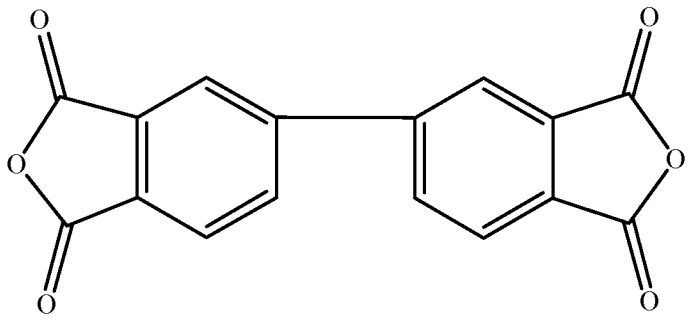
(VI)

hexafluorodipropane dianhydride (6FDA), which comprises one of more isomers having the structure of formula (VII),



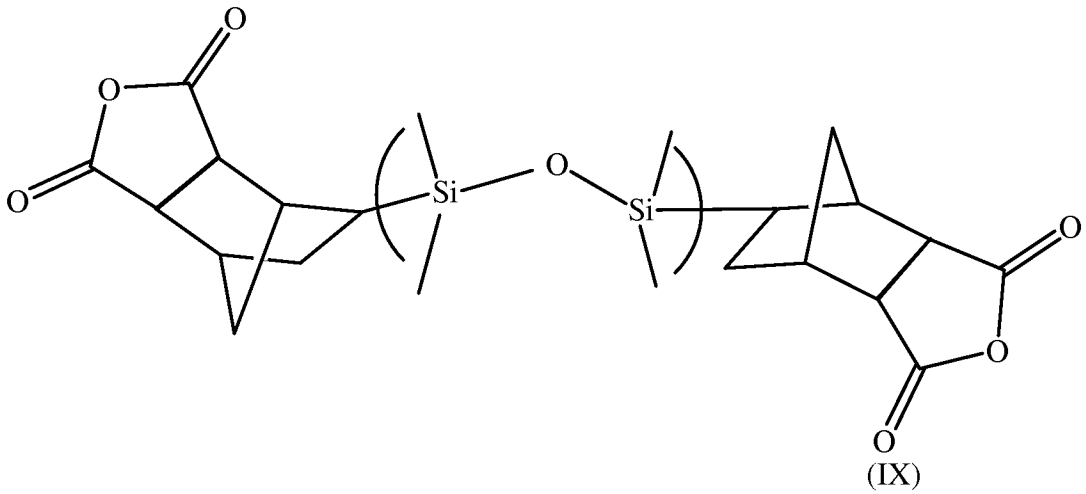
(VII)

4,4'-bisphthalic anhydride (BDA), which comprises one of more isomers having the structure of formula (VIII),



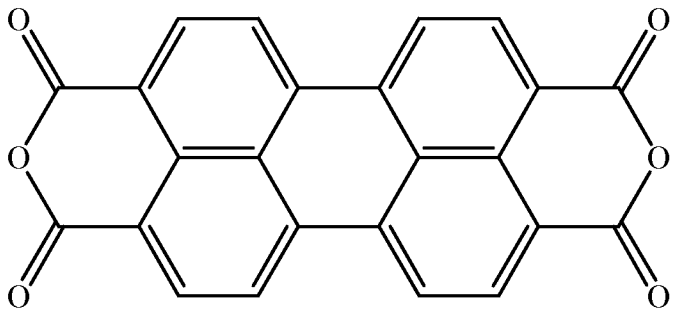
(VIII)

an isomer having the structure of formula (IX),



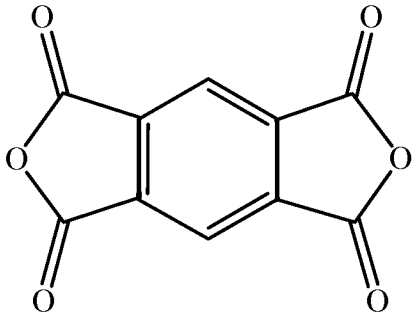
(IX)

3,4,9,10-perylenetetracarboxylic dianhydride having the structure of formula (X),



(X)

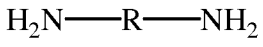
pyromellitic dianhydride having the structure of formula (XI)



(XI)

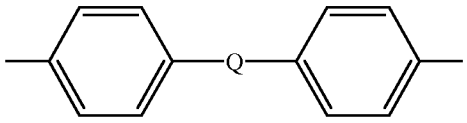
or a combination comprising at least one of the foregoing dianhydrides.

Claim 39. (Original) The sensor of Claim 36, wherein the diamine has the structure of the formula (XII)



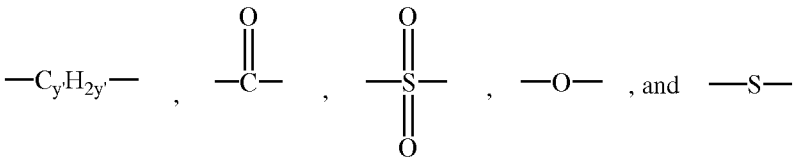
(XII)

wherein R is a divalent organic radical selected from (a) aromatic hydrocarbon radicals having 6 to about 20 carbon atoms and halogenated derivatives thereof, (b) alkylene radicals having 2 to about 20 carbon atoms, (c) cycloalkylene radicals having 3 to about 20 carbon atoms, and (d) divalent radicals of the general formula (XIII)



(XIII)

where Q is a covalent bond or a member selected from the formulae



(XIV)

where y' is an integer from 1 to about 5.

Claim 40. (Original) The sensor of Claim 36, wherein the diamine is m-phenylenediamine, p-phenylenediamine, bis(4-aminophenyl)methane, bis(4-aminophenyl)ether, hexamethylenediamine, bisphenol A diamine, 1,4-cyclohexanediamine, diaminodiphenylsulfones or a combination comprising at least one of the foregoing diamines.

Claim 41. (Original) The sensor of Claim 29, wherein the organic block copolymer coating is semi-crystalline.

Claim 42. (Currently amended) The sensor of Claim 33, wherein the second segment is a polysiloxane and the first segment is an organic polymer, and

the organic polymer is polyacetal, polyacrylic, polycarbonate, polystyrene, polyester, polyamide, polyamideimide, polyarylate, polyarylsulfone, polyethersulfone, polyphenylene sulfide, polyvinyl chloride, polysulfone, ~~polyimide,~~ polyetherimide, polytetrafluoroethylene, polyetherketone, polyether etherketone, polyether ketone ketone, polybenzoxazoles, polyoxadiazoles, polybenzothiazinophenothiazines, polybenzothiazoles, polypyrazinoquinoxalines, polypyromellitimides, polyquinoxalines, polybenzimidazoles, polyoxindoles, polyoxoisoindolines, polydioxoisoindolines, polytriazines, polypyridazines, polypiperazines, polypyridines, polypiperidines, polytriazoles, polypyrazoles, polypyrrolidines, polycarboranes, polyoxabicyclononanes, polydibenzofurans, polyphthalides, polyacetals, ~~polyanhydrides,~~ polyvinyl ethers, polyvinyl thioethers, polyvinyl alcohols, polyvinyl ketones, polyvinyl halides, polyvinyl nitriles, polyvinyl esters, polysulfonates, polysulfides, polythioesters, polysulfones, polysulfonamides, polyureas, polyphosphazenes, polysilazanes, or a combination comprising at least two of the foregoing organic polymers.